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THE TEACHERS COLLEGE JOURNAL

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A Study of the License Qualifications and Placement of the Graduating Class of 1932 of the Indiana State Teachers College

Virgil R. Mullins
Director of Placement
Indiana State Teachers College

There were 580 (392 women and 188 men) members of the 1932 graduating class of the Indiana State Teachers College. The distribution is given below.

non-employment. All but sixteen of the four-year graduates and fifteen of the two-year graduates replied.

The terms "placed" and "placement" refer to the employment of

<i>Course</i>	<i>Men</i>	<i>Women</i>	<i>Total</i>
Master's degree	20	14	34
Four-Year			
Regular	65	74	139
Regular and Special	26	55	81
Special	33	44	77
Elementary	—	13	13
Two-Year			
Primary	—	85	85
Intermediate-Grammar Grade	44	84	128
Rural	—	23	23
Total Class	188	392	580

Early in the fall of 1932 a questionnaire was sent to all of the above graduates to determine if they were teaching and what subjects or grades they were teaching; or if they were not employed and the reason for such

graduates, not to the activities of the college placement bureau in securing positions for such graduates. Students are considered not available for teaching positions when they have said that they are not inter-

ested in teaching; also, married women whose husbands have positions are placed in this category. The placement of four-year graduates is considered by single license groups because of the wide range of license combinations.

Master's Degree. Twenty-four of those who received the Master's degree in Education are teaching; four women and six men are not employed. Seven (men) hold principalships; thirteen are employed in city school systems; the others are teaching in small high schools. The percentage of placement is seventy-three.

Art. Fifty-four per cent of the twenty-seven art majors are teaching. The number of licenses increased forty-two per cent this year while the placement declined sixteen per cent.

Commerce. Twenty-eight of the sixty-one commerce graduates are teaching; the placement percentage is forty-eight because two of the graduates are classed not available. Placement declined twenty-seven per cent and the number of licenses increased thirty-nine per cent.

English. Ninety-six students completed English majors, an increase of eleven per cent more than the previous year. Fifty-three per cent of those available were placed; this was fourteen per cent less than the previous year.

French. Seven of the eight French majors were available; one is placed. The number of majors in French increased sixty per cent while the placement declined forty-six per cent.

Home Economics. Twenty-two of the thirty-eight home economics graduates are teaching. The num-

ber of licenses increased fifteen per cent more than last year and the placement decreased approximately sixteen per cent.

Industrial Arts. Thirty-five students were licensed in industrial arts, a decrease of thirty-seven per cent from last year. Sixty per cent were placed, thirty-five per cent less than the previous year.

Latin. Sixty per cent of the seventeen Latin majors are teaching. The number licensed in Latin declined ten per cent while the number placed declined thirty per cent.

Mathematics. All but one of the thirty mathematics majors were available and eighteen are teaching, a percentage of sixty-two. The decline in number licensed is twenty-seven per cent; the decline in number placed is only nine per cent.

Music. Sixty-seven per cent of the forty-two majors in music are teaching. Last year eighty per cent of the forty-three majors were placed.

Physical Education. Fifty-one students majored in physical education; forty-five per cent are teaching. The number of licenses increased thirty-seven per cent while placement declined seventeen per cent.

Science. Approximately fifty per cent of the seventy-one available science majors (seventy-three were licensed in science) were placed. The number of licenses increased twelve per cent, while the number placed decreased approximately ten per cent.

Social Studies. Fifty-six graduates held licenses in social studies, but five were not available. Sixty-one per cent of those available are teaching. The number licensed declined twenty per cent from the previous

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Preparation for Teaching Social Studies in Indiana High Schools

Waldo F. Mitchell

Head, Department of Social Studies
Indiana State Teachers College

A questionnaire was filled out by social studies teachers in high schools in various parts of the state. Many interesting findings and opinions were derived from these replies. Some of the results are hereby recorded.

If the social studies are classified into five groups—general history, United States history, economics, political science or civics, and sociology, it is noted that sociology is taught far less frequently than the other four. A large proportion of the teachers of history teach only one of the five social studies. For example, forty per cent of those who teach United States history teach only the one social studies subject, while eighty-five per cent teach two or less; but they may teach subjects other than social studies. Only a small proportion of those who teach economics teach only this one social study; forty-three per cent of the economics teachers teach three or more social studies; nine per cent teach only economics and subjects other than social studies.

The usual grade placement and curriculum are:

- Seventh grade — United States history.
- Eighth grade — United States history.
- Ninth grade — General history or civics.
- Tenth grade — World history.
- Eleventh grade — United States history.
- Twelfth grade — Economics and civics or political science.

The median and average of college

credits shows that typical teachers of social studies have semester hours scattered as given below.

<i>Subject</i>	<i>Median Hours</i>	<i>Average Hours</i>
General history	12	15
United States history	12	15
Economics	6	7
Political science	6	8
Sociology	6	6

Most teachers have had some of all five of the social studies. The teachers of less experience and the younger ones have a larger proportion of economics and sociology than the older teachers. Usually these younger teachers have a smaller proportion of history than have the older teachers.

Both young and old would choose more hours in economics and sociology and in political science when doing further work in social studies. Most of the teachers believe they have either a working knowledge or a sufficient mastery of the social studies subjects they are teaching, but most of them believe they would increase their hours in the newer social studies if they were going to college again.

Teachers of history are slightly better prepared to teach general history than any other social study, if adequacy of preparation is judged by the number of hours of college credit. If, on the other hand, adequacy of preparation is judged not only on the basis of the hours of college credit but also on the amount of hours offered by five mid-western universi-

ties as a measure of the length of time necessary for mastery, then it may be concluded that the teachers are best prepared in United States history. Teachers of one history have had nearly as many hours in a second history.

Teachers of economics are better prepared to teach two other social studies than they are to teach economics. The same is true of political science and sociology. In other words, those who teach any of these three subjects usually are better prepared to teach history than to teach these subjects.

In general, teachers of social studies believe their adequacy of preparation for the subjects they are teaching correlates positively with the number of hours of college credit they have had. Teachers who teach history or political science, and who believe they have the highest of four degrees of adequacy for teaching these subjects, actually have thirty to fifty per cent more credits in these fields than have social studies teachers in general. Teachers of economics have about the same number of hours in economics no matter which of the four degrees of adequacy of preparation they believe themselves to have.

Teachers in the larger cities (population more than 50,000) have sixty-seven per cent more credits in social studies than have teachers in places with less than 1,000 population. In general, the larger the city the larger the number of college credits the teachers have. Probably the number of hours of credit in these fields has been a material factor in securing placement for teachers in the larger school systems, and, other things

equal, the teachers with the most adequate preparation in subject matter will be selected for positions in the larger school systems of the state. Of course, there are several other factors that may be unequal in any given case.

Teachers who self-judge their adequacy of preparation for teaching the various social studies feel a greater degree of deficiency in economics, political science, and sociology than in history. This is the reason that, if going to college again, they would choose a larger proportion of their credits in these newer social studies. They would choose more hours in these newer social studies, even if they had to choose less education. Teachers who have had some of one social study, and who would choose to take more or take less of the one under consideration, usually would choose more. Below is given the average of such situations:

	<i>Econ.</i>	<i>Polit. Sci.</i>	<i>Soc.</i>
Semester hours of college credit	7.0	7.0	5.3
Hours they would choose again	11.3	9.0	9.2
Increase in hours they would choose	4.3	2.0	3.9

The order of frequency of use of the various types of teaching, ranked from the question and answer method (most frequently used) to the Winnetka method (least used), is as follows: (1) question and answer; (2) student reports; (3) problem method; (4) socialized recitation; (5) lecture; (6) projects; (7) supervised study; (8) written essays; (9) unit mastery; (10) laboratory; (11) contract or Dalton; (12) class organized; (13) dramatization; (14) type study; (15) Winnetka. It is

tacitly understood there is some overlapping in these classifications.

No attempt was made to define these various methods or types of teaching. These rankings purport to show merely the relative frequency of use of the various types of teaching, and not the relative amount of time teachers use them. For example, given ten teachers, all of them might use the question and answer method, and use also some of the other methods. Eight of the teachers might use the problem method predominantly and other methods some. If one were to weight these frequencies with the relative proportion of time given to each type the rankings might be different; probably they would be changed very little. The question and answer method is found most frequently; probably it is used a larger proportion of the time also. Younger teachers are more apt to use the plans less frequently used than are the older teachers. Those types used most frequently usually are used by the teachers of most experience. Variation of method as between the various social studies exists, but not to a significant extent.

Teachers believe the main causes of legal delinquency of students are found outside the school systems. Other forces are more powerful than social studies teaching. The main forces against good citizenship are believed to be: (a) monies; (b) family influences; (3) non-organized pastimes, such as pool rooms. The main forces for good citizenship are believed to be: (a) family influences; (b) organized groups not associated directly with schools, such as clubs, boy scout troops; (c) neighborhood

influences. Family influences and neighborhood influences may be either good or bad. Movies usually are against citizenship in the belief of the teachers. Public policy should consider these forces in relation to citizenship.

Many teachers offered suggestions on how teacher training may be improved. These two quotations are typical of many that might be given. Both are given by teachers with more than fifteen years of teaching experience who are now teaching in one of the larger cities.

"I am of the opinion that mechanics of teaching have been over-emphasized and educational credits have been stressed to the detriment of the informational side, with the result that enthusiasm for the subject is lacking among teachers of history. Teachers are so involved in the machinery of education that the subjects they teach are neglected."

"In my judgment it is desirable that teachers of the social studies be better informed in regard to current problems in politics, industry, commerce, and similar problems. It has been my experience that teachers who are so informed receive a better response from pupils, parents, executives and public than those who are only casually informed. Teacher training institutions *might* assist by inclusion of courses in the fields allied to history."

Many other quotations similar to these have been received. These statements of opinion and the findings already stated above are the outstanding results of the questionnaire. These facts are useful in planning our teacher training for teachers of the social studies. Teacher training in-

stitutions will probably not interpret the findings in a uniform manner; some will probably place one inter-

pretation on the findings, and others still another interpretation.

A STUDY OF THE LICENSE QUALIFICATIONS AND PLACEMENT OF THE GRADUATING CLASS OF 1932 OF THE INDIANA STATE TEACHERS COLLEGE

(Continued from Page 238)

year and the number placed declined seven per cent.

Four-Year Elementary. Nine of the thirteen women who completed the four-year elementary course are teaching. This is a placement of seventy per cent.

Intermediate - Grammar Grade. Seventy-one per cent of the 128 graduates of the two-year intermediate-grammar grade course were placed. This is a decrease of twenty-three per cent from the previous year.

Primary. Fifty-seven per cent of the eighty-five two-year primary graduates are teaching. The percentage has declined thirty-one.

Rural. Eighty per cent of the twenty-three rural school two-year graduates are teaching. Last year ninety-five per cent obtained positions.

The placement when considered by courses is as follows:

Course	Per Cent
Master's degree	70
Four-Year	
Regular	60
Regular and Special	44
Special	47
Elementary	70

Two-Year

Primary	57.5
Intermediate-Grammar Grade	71
Rural	80
Total Class	60

There is an increasing number of people who are qualifying for licenses in three subjects according to this study. The third choice is usually made in a subject in which the percentage of placement has been high. That the reduction in school expenses due to economic conditions is reflected in the choice of teachers is shown because fewer specialized teachers are being called for and more teachers are being placed who teach several subjects. It is the opinion of the writer that the percentage of placement of the graduates of four-year courses is much higher than it would have been if more had specialized in only one or two lines of work.

The percentage of placement was sixty for the entire class of 580. If five per cent are considered not available for teaching, the percentage of placement is increased to sixty-three, which is twenty-three per cent lower than the previous year.

Follow Up Study of Graduates from the Four Year Music Supervisors Course at the Indiana State Teachers College

Lowell M. Tilson
Head, Department of Music
Indiana State Teachers College

Questionnaires were sent from the music department of Indiana State Teachers College to 177 graduates of the special four-year music supervisors course to find out what will be expected of the prospective teachers of music when they go into the field. The members of the department felt that they could train the students better to improve the conditions if they knew what was to be expected of these prospective teachers in their future positions.

Eighty-seven graduates replied. Seventy-six are teaching; two of the eleven not teaching are in school doing work for the master's degree. Fifty-six of those now teaching are music teachers; ten are music supervisors; five are a combination of teacher and supervisor; five did not reply to this question. Nineteen (25 per cent) of those teaching teach only music; thirty-one (40.8 per cent) teach music and one other subject; sixteen (21.1 per cent) teach music and two other subjects; four (5.2 per cent) are teaching music and three other subjects.

When music is taught with one other subject, those subjects combined with it and the number of times in each case are: art, 10; English, 10; commerce, 4; mathematics, 2;

home economics, 2; spelling, 1; Latin, 1; agriculture, 1.

The two subjects combined with music and the number of times each combination is found are: art and English, 6; English and physical education, 4; art and physical education, 2; English and commerce, 1; art and history, 1; art and home economics, 1; art and writing, 1.

Two of the four graduates who are teaching music and three other subjects are teaching it with art, English, and physical education; one is teaching it with art, English, and physiology; and one is teaching it with art, home economics, and physical education.

From the above paragraphs it is noted that approximately fifty per cent of the graduates who teach music with other subjects are teaching it with art and with English. The next subject in order of frequency is physical education.

A list of the various branches of public school music and the number of graduates teaching each branch is given below:

Branch	Number
Chorus or Glee Club	63
Orchestra	55
Grade School Music	54
Junior High School Music	44
Instrumental Classes	33

Music Appreciation	24
Band	20
History of Music	11
Harmony	11
Voice Training Classes	10

The curriculum in music at Indiana State Teachers College adequately prepares the students to meet the demands made upon them in the field.

The average salary of these seventy-six graduates who are teaching is \$1374; the median salary is \$1241.10; and the standard deviation is \$488, showing that approximately two-thirds of the salaries range between \$886 and \$1862.

The average music talent score for this group is +1.0695 (standard score). This is but little less than the average score found in a study of the music students in this college for a six year period. The median score is +1.375 and the standard deviation is 2.216.

The average percentile rank on the basis of the psychological tests is 58.25, slightly better than that for the students studied over the period of six years.

It was found that the average sal-

ary of those who had music talent scores above the median is \$1336.47, while it is \$1176.71 for those below the median. The average salary for those with psychological ratings above the median is \$1312.70, while it is \$1140 for those below the median. The average salary for those with both ratings above the median is \$1407.14; it is \$1188.88 for those with both ratings below the median.

Another study made by the author shows a high relation between music talent scores and ability to teach the subject. The range of music talent for the students studied over the six year period is from -12 to +5. It has been found that none of the graduates teaching have a music talent score that is less than -2. From these facts it seems evident that students with low music talent test scores should be eliminated from this field. That is what the department of music is trying to do, especially now when there is an evident oversupply of teachers. This means a smaller number of students in the department, but a higher quality product.

The Influence of Environment on Development

Fred Donaghy

Professor of Physiology and Hygiene
Indiana State Teachers College

This subject is embryological in nature; but it involves the discussion, however brief, of two fundamental problems, (1) the general action of environmental factors on the individual, and (2) the trans-individual action of external factors.

It seems reasonable to assume that in every individual reaction base there exists a complex of factors which determine development and upon which external factors have influence. In general, the resultant is individual and trans-individual.

Environment and internal factors are extremely complex. This is readily understood when an analysis of the factors involved in domestication of plants and animals including the most domesticated — man — is attempted. Every reaction base has, inherent in itself, an automatic scheme for development and unfolds itself in orderly sequence when not adversely disturbed. Domestication has a broader application than purposeful and adaptive. Culture and civilization yield to its influence; geologic change and technical advance create a new environment and remove life to new surroundings. When the complexities are known much study will be needed for their interpretation and application.

A few of the known external factors may advantageously be discussed. These are gravitation, centrifugal force, heat, light, metabolism, nutrition, and functional adap-

tations.

Organisms never escape the action of gravity; however, its influence is probably less than formerly believed. Direct influence is shown when the axis of development in certain hydroids can be changed at will and indirect when a yolk egg's position is changed.

Centrifugal force in experimental development may change the direction of the cleavage spindle, the rate of cell division, and cause the separation of blastomeres. It makes possible the study of blastomeric potency. Every one knows how easily the contents of a hen's egg can be rearranged according to their specific gravities.

It is common knowledge that there are temperatures that we cannot transcend, that increased heat quickens the beating embryonic avian heart and that cold slows it. Experimentally it has been shown that sea urchins' eggs exposed to a temperature of 30°-31° C for ten minutes may result in (1) degeneration of the germ, (2) separation of blastomeres, resulting in twinning and often an intestinalless embryo. Polymorphism in butterflies, monstrosities in the aves and amphibia, size of organs in the frog larvae, and albino rats are further evidences of thermal influences.

The tanning and blistering action of the sun's rays are common place knowledge. The ultraviolet light fad

is with us yet. Ultraviolet light causes regression of mitosis and kills tissue readily. Sunlight is a factor in pupal pigmentation, destroys eye-pigments in certain developmental stages, and may determine the presence or absence of eyes in certain animals. The effect is shown on ectodermal derivatives.

X-ray and radium produce remarkable pathological changes. Much interest in relation to development seems pertinent since their use in modern medicine.

The chemical composition of a liquid environment has a part in development. Those embryos whose natural habitat is aqueous are affected most, those in utero least. The withdrawal of calcium and sodium from the sea-water environment of sea-urchins' eggs causes an interruption of mitoses, separation of blastomeres, etc. Excessive lithium chloride may cause the egg plug to remain, no intestinal formation and spina bifida. Cyclopia may result from an excess of magnesium salts. Body length of certain species seems determinable by the saltiness of the environmental water.

Nutrition and metabolism suffer environmental change. Certain larvae develop no pigment unless fed on oak leaves. The length of the frog larval intestine is determined by a meat or vegetable diet.

Probably the most curious changes are functional acquirements of long bones and blood vessels when surgery has intervened. Lines of stress and compression are always evident, however, the joint itself is a hereditary entity. An ankylosed elbow joint was removed from a thirteen year old girl. Two years later articular

surfaces simulating the original developed. Portions of veins used to repair arteries simulate arteries in time.

The second problem considers the trans-individual effect of external factors and is not limited to purposeful and adaptive changes, but to the broader aspects of development. Three factors are noted—namely, reaction-base, reaction-norm, and later stages of development.

Progenators supply the reaction-base upon which factors like the ones discussed ply. The inherent reaction-norm insures an orderly development and makes heredity a reality. Whatever the trans-individual effect is will not be explained as Lamarckian but upon induced changes in the reaction-base or in later stages of development. The reaction-base is mutable, hence the reaction-norm can be altered. Reasonable evidence indicates that herein lies the trans-individual changes.

The working of any external factor to produce a definite change in development is called induction, of which there are several types. Direct induction, the simplest type, is applicable to the unicellular and not to the metazoon organism.

Somatic induction considers the active intervention of the soma between a reaction-base and some external factor. At once two kinds of somatic induction suggest themselves, namely, merogenic and hologenic. In merogenic somatic induction, the factors are some external agency, the intervention of a particular part of the soma and a mutable reaction-base. In somatic hologenic induction the whole soma is changed, the other two

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The Composition of Matter

Paul D. Wilkinson

Associate Professor of Chemistry and Physiology
Indiana State Teachers College

It has been the dream of man for many centuries to be able to convert lead into gold. Today the scientist dreams, not so much of the transmutation of the elements, as of the release of the inter-atomic energy that would be a result of this process. If such a source of energy were to become possible, it is conceivable that the entire climate of the polar regions could be so altered that the Southern Californian would leave his native heath for points north. It is the purpose of this paper to briefly follow the path worn by the footsteps of science in the search for this pot of gold.

The ancients believed the earth to be composed of four elements: namely, earth, fire, air, and water. As man probed deeper and deeper into nature, he concluded that many hundreds of substances were involved. As scientific investigation proceeded, it became more and more apparent that these thousands of substances were really various combinations of a comparatively few elemental parts of matter, which for the sake of convenience were called elements. Due to the work of Mendelejeff and other investigators, it became apparent that there must be ninety-two of these elemental substances. For the last seventy-five years there has been a mad race to see who would have the honor of their discovery. Up to 1926 all but three had been discovered and none of them by American investigators. Then in 1927 Hopkins, at the University of Illinois, discover-

ed one and called it Illinium after our neighboring state. During the past twelve months Allison, a Virginian, discovered the two remaining elements at Alabama Polytechnic Institute. He named them Virginium and Alabamine. (Incidentally, the total cost of the apparatus used by Dr. Allison did not exceed one hundred dollars.) These discoveries mark the end of a very interesting scientific era.

In late years we have all become familiar with the words atom and molecule. At the same time there has occasionally appeared before us such words as electron, proton, alpha particle, etc. These words are products of researches into the atom which were tremendously stimulated by the discovery of radium by the Curies in 1911. As a result of these more recent investigations, science has now come to the conclusion that all matter is made up of not four substances such as the ancients proposed or of ninety-two that more modern thought has suggested, but of two primordial parts of matter called electrons and protons. In the last few years, science has come to the firm belief that these electrically charged particles may exist in various combinations independent of the atoms. In order to better explain these combinations a diagrammatic representation of the lithium atom is given herewith.

The whole configuration goes to make up what is known as the lithium

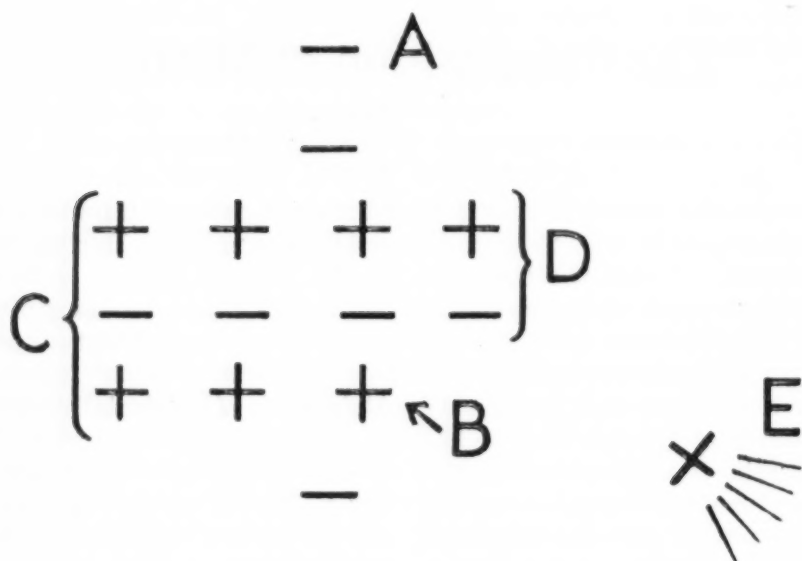


Fig. I.

atom. Other atoms are more or less complex, depending upon their size. The negatively charged particle indicated by the negative sign at A is called an electron. (Incidentally, it is not possible for most of us to conceive of the almost infinitesimal size of the individual atoms. If a piece of lithium the size of a pea were enlarged until it reach the size of the earth, then the individual atoms would be about the size of buck shot. It is thought that electricity is the movement or flow of these negative particles or electrons. They are also termed cathode or beta rays when emitted by the X-ray tube or by radium. The positively charged particle, B, is known as a proton and it is over eighteen hundred times as heavy as the electron. The close grouping of four protons and two electrons as shown at C is the modern alpha particle which is one of the emanations of radium. Last year a new combi-

nation was proposed and generally accepted. This consists of a very close union of one proton and one electron and is termed a neutron. It is represented by D in the diagram. If it were possible to prepare a thimbleful of neutrons they would weigh about 20,000 tons, but nothing would hold them.)

Man has sought the Philosophers Stone so that he could change lead into gold for many hundreds of years. Pure science, not quite so ambitious at first glance, has succeeded in transmuting a few of the lighter elements. In 1932 Crockroft and Walton at the Cavendish Laboratories succeeded in projecting proton particles (represented by E in diagram) with tremendous velocity against lithium atoms with the result that the lithium atoms were disrupted and two alpha particles (like C in the diagram) were formed. In this change, twenty-

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Frontiers of Science: Geography

W. LeRoy Perkins

Associate Professor of Geography and Geology
Indiana State Teachers College

*"The older changeth, yielding place to new,
And God fulfills Himself in many ways,
Lest one good custom should corrupt the world."*

—Alfred Lord Tennyson, *The Passing of Arthur*.

Like other fields of scientific investigation, geography, during the last few decades, has experienced a state of flux. Investigators have found themselves caught between two streams of thought, one sparkling with the waters of *pure* science, the other overflowing with the somewhat troubled but enriching waters of *applied* science. Some scientists insist that they are satisfied in pursuing scientific research for its own sake, and that they are not interested in its applications, while others, realizing that their findings may have practical value, strive to unfold ideas which may be given useful application to the end that the welfare of mankind may be improved. Geography today is inclined toward the latter course. It has been put to work so that it may contribute to social progress.

Unlike the other scientists, however, geographers have had the additional burden of trying to arrive at a definition and delimitation of their field, forming a suitable nucleus around which they could organize their subject matter and conduct further investigations. In the middle of the last century the subject was largely descriptive. In the 1880's it was called the science of distribution and was defined, in 1881, by the International Geographical Congress at Venice, as including "the study of

the surface forms of the earth and the reciprocal relations of the different branches of the organic world . . . indicating the distribution of beings organic and inorganic upon the earth." This idea of distribution is still held by some geographers. In 1892 Prof. William Morris Davis recognized "the increasing attention given in recent years to physical over simply descriptive and political geography." Soon thereafter the trend was back toward the study of the earth as the home of man. Shortly after the turn of the present century, the subject entered what might be called the environmental or biogeographic stage, and was defined as the study of "the relation between the earth and its inhabitants, between the physical environment and the environed organism." A change from that viewpoint in recent years was inaugurated by Prof. Harlan H. Barrows, of the University of Chicago, when, in his presidential address before the Association of American Geographers in 1922, he interpreted the field of geography as "dealing solely with the mutual relations between man and his natural environment." Geography had become "human ecology." It had reached the *social stage* in which we find it today. Although it searches the vast protoplasm of facts and uses ideas commonly as-

signed to the natural scientists, it links them with ideas used by the social scientists around a common nucleus. As characterized by the school of geographic thought with which the writer is most familiar, "the distinctive function of geography is to describe and explain the relations between man and his natural environment; to examine and interpret the adjustments which groups of people have made to the combinations of natural environmental conditions which exist in the regions in which they live; to explain why men use the land and resources as they do; to study the advantages and disadvantages, the opportunities and handicaps, of unit regions throughout the world for utilization by man. Geography is neither a natural science nor a social science; its field lies between the domains of those subjects; its point of view is unique among the sciences which deal with the earth or with humanity."

Geography, therefore, is a young-old science. The last two decades have witnessed its rejuvenation from a subject which was largely confined to the grammar school and high school levels to one which has experienced a remarkable development in colleges and universities. The demand for trained geographers to teach in colleges and universities was one of the last to slacken as the depression advanced. It is apparent that the new geography is filling a want. Aside from the demands for teachers of geography, government bureaus, municipalities, chambers of commerce, industrial concerns, and transportation agencies are seeking the services of trained geographers to make surveys and to give advice

regarding future procedure. With a return to normal business conditions, the opportunities for geographers to apply their knowledge will probably be greatly increased.

To those who are conducting their research under the discipline promulgated by the division of geography of the University of Chicago, one of the frontiers in the field is that of urban geography. Studies of a few cities have already borne fruit and several other studies are now under way. The regional location of cities, their arrangement of streets, of retail and wholesale stores, of manufactural establishments and transportation facilities, of residences, schools, churches, parks, etc., has come about, perhaps, in a more or less haphazard manner, as man has recognized certain factors of the natural environment which he could exploit to his advantage. While the geographer studies the pattern, forms, and functions of a city as he finds them, his investigations may lead to recommendations which would be of great advantage to individual enterprises and would enhance the economic development of the city. In a brief survey of Terre Haute the writer recently discovered several business opportunities which have apparently been overlooked. A more careful and extended survey might have revealed other possible economic adjustments. Perhaps it is advisable, at this juncture, to indicate that the geographer does not feel that the world, without his help, would pass out of existence. He realizes, however, that his studies may contribute at least a small part to human welfare and progress.

In the few remaining moments let us see what a brief geographic study

of Terre Haute would include. First, we are interested in the factors of the natural environment with which man has had to deal in this locality. The characteristics of the climate may, to the layman, seem of little consequence, but to the scientist the climatic factor is of utmost importance and merits considerable attention. Time limitations prevent us from amplifying this point. The form of the land in this vicinity, the nature of the soils, presence of mineral resources such as coal and shale, the water supply, and the nature of plant and animal life are other factors of the natural environment which would be studied. In order to evaluate the factors enumerated thus far it is evident that a basal knowledge of geology, meteorology, climatology, and the biological sciences is the foundation of geographic training. The investigator would note, also, the location of Terre Haute near the center of population of the United States, and its connections by railroad and highway with regions of production and consumption, carefully organizing, mapping, and charting his material so that it would be revealing to the highest degree. Maps, charts, graphs, tabulations, and pictures perform a significant part in all geographic investigation and interpretation.

Mapping of the city to locate the functional forms is the first requisite for even a superficial study. From such a map one may note the relationship of the various forms, and perhaps recommend improvements if he is called upon to do so. If his purpose is to study certain selected establishments and their relation to transportation routes, a map of those features

alone would be even more advantageous than the first map shown. Actual measurements of sizes and distances and accurate mapping are quite essential in detailed geographic work. A method of studying certain sections of the city intensively was developed in the study of Terre Haute. This consists of a superimposed profile of the central business district of Terre Haute. The lengths of the stores were measured and their heights recorded in stories. The two sides of the streets were then plotted on the same base line. From this representation one can easily locate the heart of the central business district, and could study its relationship to other parts of the urban organism. Another map which is useful in studying a city is a map of its trading area. Such a map of Terre Haute happened to have been obtainable from a local source and the writer was saved the immense amount of work which would have been necessary in its compilation.

The particular problem, from the report of which these few points were taken, was a geographic portrayal rather than an interpretation of Terre Haute. It involved, in addition to the items already mentioned, a study of the manufacturing plants and their utilization of the factors of the natural environment. From the standpoint of practical application this phase of urban geography probably offers the greatest possibilities.

In this discussion I have endeavored to accomplish two things. First, to explain what modern geography is and what it is trying to do; second, to call your attention to one of the frontiers, that of urban geography.

Physical Education for Women at Indiana State Teachers College

Florence M. Curtis

Head, Department of Physical Education for Women
Indiana State Teachers College

Physical education, for many years tolerated only because the interest of young people would not let it be completely ignored, is rapidly emerging from the stage of an educational extra to a role of major importance. Proof of this statement is readily found in the present day physical education laws for elementary and secondary schools, in the unprecedented amount of attention being given to health and physical education in colleges and universities, and in the increasing number of people in school and out of school who seek relaxation in a great variety of big-muscle athletic activities.

However, physical education was no stranger to the students of this institution even before the Indiana state law of 1919 was passed. A service program has been provided for both men and women since 1897. Today this service program includes both courses offered for meeting the general college requirement and purely recreational activities. After an introductory course in fundamentals, a course which strives to acquaint each individual student with her own potential skills and interests or physical needs and limitations, she is permitted to choose those activities which suit her best. The splendid new facilities make possible a rather wide choice. If a student is socially-minded and likes to play in groups she may choose any of the highly or-

ganized team games. If she prefers individual sports she may choose tennis, swimming, or possibly archery. If she is musically or artistically inclined, she may choose dancing.

Recreational activities are planned and carried on by the students themselves. The Women's Athletic Association is the group directly responsible. Year by year more girls are finding improved physical endurance, poise, emotion control, and self-confidence in games.

Since 1922 the department has maintained courses for the training of teachers and supervisors of physical and health education. The curriculum follows the recommendations of national accrediting agencies and of the Indiana state department of public instruction. Roughly the courses fall into two main divisions. The first group contains courses in principles, history, special methods, organization and administration, and courses for the acquisition of knowledge of skill in the technical activities which go to make up the physical education activities program. The second group includes courses in the basic sciences: biology, physiology, and hygiene or health education as it is more universally called now.

It is, then, through these two main channels—the general service program and the training of special teachers—that physical education is

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Some Basic Factors in the Improvement of Professional Preparation in Physical Education

Arthur L. Strum

Head, Department of Physical Education for Men
Indiana State Teachers College

The outstanding problems involved in the professional preparation of teachers of physical education (and other teachers for that matter) center around four general divisions as follows:

1. Problems related to a definition of what constitutes good teaching.
2. Problems related to the selection of prospective students.
3. Problems related to content and teaching of the professional curriculum.
4. Problems related to the placement and in-service follow-up of graduates.

In attacking any problem certain techniques must be utilized. The problems involved in the social sciences are quite different from those in the physical and exact sciences. Investigators in the latter field have developed relatively precise methods and techniques. The progress made here is due perhaps to the nature and content of the exact sciences, and to the fact that measurement has been going on for several hundreds of years. On the contrary, in the field of social sciences and education, measurement is difficult because of many varied and unpredictable factors; and, also, the use of techniques for measurement is relatively new. It is important to note that the tools and techniques in the first field can

seldom be used to advantage in the second.

The use of questionnaires, tests, health examinations, photographs, rating scales, and conferences are samples of the techniques that must be used in physical education. All must be used as guides or aids in directing thinking. The selection of students, for example, must be done by some individual or group, and it is important that many of the tools and techniques of value be used so that the final judgment represents careful, directed thinking.

We cannot place all practices on a mechanistic basis, for there are the art and human aspects of teaching. However, it is reasonable to state that progress of the social science and education, of which the teaching of physical education is a part, depends to a large extent upon the development of tools and techniques of measurement specifically devised for those fields.

There is danger, too, in self-complacency. A self survey or a rating by an outside agency (such as the North Central Association) is helpful. To this might be added the experimentation which is going on at Wisconsin, Chicago, Rollins, and the Teachers College of Columbia University. Is our present curriculum and teaching good enough?

Changing times demand new methods and a new attack on our present problems. President Roosevelt referred to this principle in his promise of a "new deal." To date, there seems to be evidence that the principle is sound. The static and fixed curriculum must be altered to meet changing conditions, and must always be changed to meet the needs of

what we consider good in life.

The changing conditions and needs of the school must be studied in the follow-up and in-service investigations. Careful studies have indicated that health, citizenship training, and worthy use of leisure time may well be set up as general objectives of physical education.

PHYSICAL EDUCATION FOR WOMEN AT INDIANA STATE TEACHERS COLLEGE

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endeavoring to maintain its sphere of usefulness. With its possibilities for building organic power in the biophysical mechanism, with the opportunities offered for building a sane

emotional life, and with the training in worth while leisure-time activities, it should represent one of the potent forces in education in providing for full and rich living.

THE INFLUENCE OF ENVIRONMENT ON DEVELOPMENT

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elements remaining the same. The change is seen in future generations without the causative agent's presence. Three types of such change are evident, *i. e.*, pre-induced, presistant, and mutations.

Pre-induced changes are always somatic and never reaction-basic. This phenomenon is illustrated in the production of long and short headed *daphnia longespina*.

Presistant modification may continue through several generations with gradual diminution. This is indicative of an altered reaction-base. Poison acclimated perimecia and arsenic-fast spirochaetes are examples.

Mutations represent a reaction-base change. Mutations are common but the agencies that produce them are not all discovered or understood. Mutation general means a loss in the reaction-base. X-ray and naphth-

lene poisoning have produced constantly mutants among certain races of guinea pigs.

Evidence herein presented leads one to infer that natural environmental forces affect individual development and certain acquirements are inheritable. The two methods are direct and hologenic somatic induction. The acquirements are pre-induced, presistant, and mutation. It is well to remember that mutataints are more than heredity in that they possess a new reaction-base which is transmissible to future generations. These seemingly acquired phylogenic characteristics are due to a new reaction-base and are the starting points for phylogenic transformation.

The question raised and left for answer is whether in hologenic somatic induction can there arise individual advances that become phylogenic. An affirmative answer seems evident.

Teaching Combinations in the Field of Health and Physical Education in the High Schools of Indiana

David A. Glascock

Assistant Professor of Physical Education for Men
Indiana State Teachers College

The following material was taken from a paper prepared by Mr. Harold E. Moore of the state department of public instruction. The data were collected by means of a questionnaire sent to all high school teachers of health and physical education in the state.

Ninety-five teachers of health reported, forty-seven men and forty-eight women. Of the men, one was teaching it alone; the rest taught it combined with one or more subjects. Those subjects and the number of times they were taught with health are as follows: science, twenty-seven; social studies, twenty-three; English, ten; industrial arts, seven; foreign language, two; music, two. Four of the women taught it alone and forty-four in combination with other subjects as follows: home economics, thirty-two; science, seventeen; English, nine; social studies, four; foreign language, two; music, two; art, two.

There were 553 teachers of physical education who reported, 325 men and 228 women. Forty-five men taught it alone; 280 taught it in combination with other subjects as follows: social studies, 145; mathematics, 103; science, 100; English, 44; industrial arts, 41; elementary grades, 19; foreign language, 18; commerce, 15; art, 1; music, 1.

Forty-four women taught physical education alone; 184 taught it in combinations as follows: English, seventy-eight; home economics, sixty; foreign language, forty-two; social studies, thirty-four; science, thirty; music, twenty-six; art, twenty-four; mathematics, twenty-three; commerce, twenty; elementary grades, four.

Health and physical education were taught by 389 teachers, 239 men and 150 women. Fifty-four of the men taught only the two subjects, while 185 taught them in combination with other subjects as follows: science, eighty-six; social studies, eighty-two; English, twenty-three; commerce, eight; agriculture, seven; elementary grades, four; foreign language, four; art, one; music, one. Of the women, fifty-two taught the two subjects but no others, while ninety-eight taught them combined as follows: home economics, forty-seven; English, forty; science, twenty-nine; social studies, twenty; mathematics, twelve; foreign language, nine; music, six; commerce, four; art, three.

From this study it was found that men outnumbered the women in this teaching field. The average number of subjects taught by teachers of health in high schools of less than 200 pupils was three, health and two

others; while in high schools of more than 200 pupils the average was two, health and one other. The averages for health and physical education were about the same. Very little difference was noted in the four and six year high schools as there were practically the same teaching combinations.

CONCLUSIONS

1. There was little difference in the organization of health and physical education work as shown by the combinations—no separation of the subjects needed.

2. More men were teaching physical education than women. This was probably due to the fact that in many small high schools men teach both boys and girls.

3. Only in high schools of more than 600 were teachers found teaching health or physical education or health and physical education only.

4. For men teachers social studies heads the list in combination with science, mathematics, and industrial arts next in the order named; while with women home economics, science, and foreign languages seem to be the order of combination.

5. There was little evidence of any attempt to make more logical or more desirable combinations.

6. Teachers of academic subjects generally have been forced to take up physical education when it was added to the curriculum.

7. Elementary teachers, mostly men, are teaching physical education in high school.

8. There is no standard for determining the time that ought to be devoted to health and physical education.

RECOMMENDATIONS

1. Teachers should prepare in related fields, since it is necessary for them to teach several subjects in small high schools.

2. Number of women teachers should be increased in order that no man teaches girls in these subjects.

3. The use of elementary grade teachers in high school should be avoided.

4. Health and physical education should not be combined with special subjects in such a way as to expect the teacher to handle three of those subject groups.

5. Teacher training institutions should recognize the need of their graduates to be trained in at least three fields if they are to have a reasonable opportunity for employment.

Objectives in the Teaching of Latin and Its Relation to Other Subjects in the Curriculum

F. H. Weng

Head, Department of Latin and German
Indiana State Teachers College

About a decade ago the American Classical League made an extensive survey of the teaching of Latin in American public and private secondary schools. This study was financed by the General Education Board and tests were given to approximately 150,000 pupils in more than 2,000 different schools. The total number of individual tests given was nearly 750,000.

The findings of this survey were published in 1924 and they have affected the teaching of Latin greatly. Previous to that time preparation for college was a dominant factor in determining the Latin course in the high school; and the work of each of the four years' classes was so planned that it might be the best possible preparation for the year's work to follow. But the Classical Investigation showed that out of every one hundred pupils taking Latin in the first year, seventy continued in the second year, thirty in the third year, and fourteen in the fourth year, and fewer than five continued their Latin work in college. (p. 31.) Evidently, then, preparation for Latin in college should not be a factor in determining the nature of high school Latin; nor should preparation for doing the fourth year's work, as only fourteen out of every hundred would profit by doing fourth year's work. Unless the

study of Latin, year by year, can show values gained by the pupil commensurate with the time spent on it, its place in the curriculum cannot be justified. Many of our Latin teachers maintain that there must be at least a unit of two-years' work before these values are attained. I realize the value of this continuity, but I think that one year of Latin is as valuable a unit, considering the amount of time spent on it, as is a two-years' unit, or a three-years' unit, or a four-years' unit.

Since the publication of the findings of the Classical Investigation, Latin textbooks have been changed materially. The educative process in the teaching of Latin is now made functional, whereas, in the earlier texts it was largely formal. Accordingly, connected easy Latin reading material is presented early in the course. Forms and constructions of words are studied when they are needed to interpret the Latin passage in the day's assignment and not before. Sheer memory work is reduced to a minimum by analyzing words and showing how the various tenses of verbs and cases of nouns and adjectives are made by adding certain letters or combinations of letters to the stem of the word. So, too, in the study of vocabulary the new word is first met in the reading exercise, not

in a list of unfamiliar words to be memorized, as was done in the older textbooks. The student is now asked to infer the meaning of the new word from some known related Latin word, if possible, or from an English derivative; or above all from the context. That is, he is to use "horse sense," as Pat did in the story about the lost horse. When the owner was surprised that Pat had found the horse so soon, he asked him how he did it. Pat said: "I used horse-sense. I just said to myself, 'Now, Pat, if ya was a horse, where would you go?' So I went down the alley and there he was." Pat's "horse-sense" is, of course, just another name for common sense, a mental quality that cannot be instilled into the "gens homo" any too young or too often. Any subject that can engender correct habits of thinking is doing a valuable service for our boys and girls, and Latin offers some possibilities for this service, not only in the study of new words, as I have just indicated, but especially in the process of interpretation and translation. The pupil must apply common sense and ingenuity in his class work and in his home work if he is to get anywhere in Latin.

Unfortunately, Latin teachers are sometimes satisfied with slovenly "translation English," a mere exchange of verbal symbols which while it may not lower the pupil's actual standard of English, certainly does not raise it. In the hands of a competent teacher possibilities for developing a discriminating choice of English words and a feeling for language structure are offered in the process of translating from standard Latin into English that are not of-

fered in translation from a modern foreign language, because the structure of the modern languages is so nearly like the English that the pupil can translate word for word and generally have a fairly good English sentence, a thing impossible in the case of Latin. I venture to say that in some respects these possibilities are more marked in Latin translation than they are even in English composition. What I have in mind is this: assuming that the pupil understands the thought of the Latin sentence, in the process of translation he is compelled to express precisely that thought in good English. It is something definite to which he cannot add and from which he cannot detract. If the sentence is correctly interpreted, the pupil must be discriminating and selective in his choice of words.

Latin teachers do not maintain that the study of Latin develops general disciplinary values that spread automatically into all other fields of learning, but they do maintain that it makes possible "the development of certain desirable habits and ideals which are subject to spread, such as habits of sustained attention, orderly procedure, overcoming obstacles, perseverance; ideals of achievement, accuracy and thoroughness; and the cultivation of certain general attitudes such as dissatisfaction with failure or with partial success."

In regard to the question of the relationship of Latin to other departments of this school there is no doubt that it is more closely related to English than to any other subject, though it has certain contacts with several other departments, *e. g.*, with science in vocabulary and the geography of

southern and western Europe; with mathematics in vocabulary and in the formation of habits of concentrated thinking; and with social studies in matters pertaining to ancient history.

The recent textbooks, especially for the first and second years of Latin, stress also the historical and cultural background of the Latin read. The older textbooks for the first year were generally designed merely as a preparation for reading Caesar in the second year. And so a pupil who studied Latin for only two years would leave his Latin course with the notion that Caesar and his conquest of the Gauls were all there was to Rome's thousand years of history. I would not belittle Caesar's *Commentaries on the Gallic War*. They contain source material for the earliest known history of France, England, and Germany. One sentence could contain all the information that the world has from literary records about the early Britons previous to Caesar's account, and the same is true of Germany. Practically all the world's knowledge of Druidism and the religion of the Gauls, of the political, economic, and social life of this nation has been gained from Caesar's narrative. So, Caesar should always have a place in the high school Latin course, but the present plan of limiting it to the second semester of the second year is commendable, leaving a year and a half for mastering the elements of the language and for familiarizing the pupil with the historical and social background of Roman life by stories of dramatic events in Roman history; by biographical sketches of Rome's most prominent men and women; by descriptions of scenes of home life among the Ro-

mans; by stories revealing their characteristic virtues of patriotism, loyalty, respect for law, integrity, etc.; and by simple discussions of the religious ideals of the Romans and of their attainments in government, law, commerce, literature, and art. All this tends to give the pupil a sympathetic appreciation of the achievements of the Roman civilization, and a broader and deeper understanding of our own institutions as an inheritance of the past.

In a casual conversation with Mr. Canine one day he remarked that several students were not allowed to take practice because their scholarship index was below forty, but he added that he had never had to bar any of the Latin students on that account. So I wondered if we had the "cream of the crop," and I had a tabulation made in the registrar's office of all the students in our Latin classes for their scholarship index for last fall. Their average index for Latin was seventy and for all other subjects it was sixty-seven. So we had graded them a little higher in Latin than their other teachers graded them in their other subjects, but as practically all of them are majoring in Latin, probably their proficiency and interest in this subject would justify this difference of three points. Only two persons out of forty-five listed had an average index of less than forty. One of these two by far the lowest of all, had zero in Latin and nineteen in his other subjects. He is not registered this quarter and has probably decided to prepare for some other vocation. So, even if we do not have the "cream of

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The Development of Home Economics

Anne Marold

Acting Instructor of Home Economics
Indiana State Teachers College

Home economics, as defined by C. F. Langworthy of the United States Department of Agriculture, is "an organized body of subject matter which treats of food, clothing, shelter, and household management in their physical, social, and economic aspects, as related to the life and welfare of the individual, the family, and the community."

Home economics is a comparatively new field which has developed rapidly in the last fifty years. It first found its place as a recognized subject for formal instruction in 1870 when it was introduced into state agricultural colleges of the United States. When the curriculum of the elementary and secondary schools was enlarged to include hand training, "domestic science" subject matter was included as a branch of manual training. Courses given to girls were naturally those connected with the traditional home industries, cooking, sewing, and cleaning. The rapid development of these subjects in the lower schools and the demand for instructors led to the establishment of teacher training courses and promoted investigations into the pedagogical value of the subject.

In 1914 Congress passed the Smith Lever Extension Act which made federal funds available for the promotion of extension work in agriculture and home economics.

A vocation which can be followed in maintaining a home and also as a means of livelihood is particularly de-

sirable for women, who, as a rule, spend a comparatively short time in industrial work outside their homes. Recognizing this fact, the federal government in 1917 passed the Smith Hughes Act giving aid to vocational education in many subjects including home economics.

Shortly after the passage of the Smith Lever Extension Act, the office of home economics of the states relations bureau was established.

The entire machinery of home economics sponsored by government agencies during the last war was used for the purpose of transmitting the message of conservation. The fact that it proved itself useful reacted favorably on the subject itself by establishing it in public favor.

Home economics is a subject of universal interest and deserves a place in general education since it deals with the natural, social, and economic foundations of home life. Its curriculum is broad, general, and inclusive and is subject to the same changing forces which affect American home life.

The development of home economics at Indiana State Teachers College has been rapid and has followed the same trend as the general development of this subject in the United States. In the last twenty-four years it has grown from a single course which was offered under the head of manual training in 1908 to the

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Child Development and Relationship in Home Economics

Mary K. Klepinger

Assistant Professor of Home Economics
Indiana State Teachers College

The one course in home economics which deals with the study of the child under school age is called child development.

Nine main units form the outline for this course. These are: (1) physical development, (2) muscular development or muscular coordination, (3) language development, (4) social development, (5) mental development, (6) emotional stability, (7) aesthetic development, (8) habit formation, and (9) the child's ability to solve his own problems. Back of each of these units there is a study in itself based upon recent research and experience.

Each unit is approached from the standpoint of the following basic questions: (1) what standards should be set up in regard to a specific kind of development and (2) what can the adult do in trying to help the child to achieve these standards?

The laboratory in child development consists of supervised observations with children in their home. An intensive study of some child is made by each student in the class. Students observe children who are brought to class at various times.

Studies are also made of the nursery school movement, the White House Conference, and those organizations most closely connected with child welfare.

The aim of education for the nur-

sery school is to develop in the child a creative personality with an attitude of readiness to act when the situation arises. This aim is suggested for the home and for those who have the responsibility of the infant and the pre-school child.

The other course to be considered is family relationships. Various phases of home economics have been related to the family but no single course has dealt with the family as a whole until the course in family relationships was added. The course in family relationships consists of the following investigations of the family: (1) historical background of the family, (2) functions of the modern family, (3) the foundations for marriage which are believed to contribute to happy and successful family life, and (4) the relationship of the family to community.

The history of the family contributes a comprehensive view of the historical background of the American family. Some familiarity with literature is essential for an understanding of family life today.

Home life has been modified by many influences. Investigations are made of these important changes in the family to discover the function of families at the present time.

The study of foundations for marriage lends itself to a statistical study which helps to establish a factual basis of knowledge.

An analysis is made of the privileges and responsibilities of the different members of the family. The contributions of parents to the lives of their children are compared with those of children to their parents.

Studies are also made of agencies engaged in premarriage and parental education.

Certain dangers are to be avoided in teaching family relationships. The course may become historical rather than actual. The discussion may degenerate into abstract principles.

Studies may over emphasize pathological conditions. While divorce and family discord are discussed to some extent, the greatest emphasis is placed upon the positive attitude of the happy and successful home.

These courses in child development and family relationships are open to all curricula. Homemaking is for all members of the family, therefore these courses are offered to men as well as women and would be an educational asset to anyone.

THE DEVELOPMENT OF HOME ECONOMICS

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twenty-two courses which are included in the home economics curriculum at the present time.

In the spring of 1908 twenty-one girls were enrolled in Sewing I, the first course of its kind offered at this college. They were taught the elements of clothing construction in the training school building. During the next five years two more courses in sewing were added to the manual training curriculum. Cooking was not introduced until 1913 because so much equipment was needed to give the girls practical instruction and experience. Our college catalog for 1915 carried an announcement of the new domestic economy department which was to be located in the Vocational Education Building and which offered eleven courses. The courses included four courses in cooking and dietetics, four courses in sewing and textiles, one course in millinery, one course in organization of domestic

economy, and one course in elementary handwork. In 1916 a household administration course—now home management I—was added; and all of the subjects were classified under three main heads—food, clothing, shelter. Institutional cookery, home care of the sick, costume-design, house planning and furnishing, home economics methods, home management II, and supervised teaching were added in 1917 to meet the requirements of the Smith Hughes Act. The curriculum at this time was made up of eighteen courses and the name of the department was changed from domestic science to home economics. From 1917 until 1929 very few changes were made. Then four new courses—elementary dietetics, child development, problems in household buying, and family relationships—were added. At the present time twenty-two home economics courses are offered.

An Attempt to Improve Home Economics Student Teaching

Mildred Treager

Instructor of Home Economics Education in Training School
Indiana State Teachers College

The responsibilities of the supervising teacher are two-fold: (1) to protect the curriculum and see that the pupils in the training school have opportunities to learn and develop, and (2) to direct student teachers so that the pupils entrusted to them learn, and to see that there is no wasted effort on the part of either student or teacher. For the accomplishment of the latter, the Syllabus of Directed Student Teaching is the foundation upon which we build. In order to adapt the syllabus to home economics material, a set of supplementary materials has been made by the home economics faculty. This material is an effort to show gradation in student teaching problems involved in the two quarters of student teaching work.

The first sheet of the set introduces the student to the course. It includes topics concerning the building and its regulations, the classroom and its management, and the course to be taught. These topics are either explained by the supervising teacher or worked out by the student.

In the first quarter of student teaching much of the required time is spent in observing lessons taught by the supervising teacher. Frequently students do not know what they see. In order to help them, a set of progressive observation sheets is used. The first observation sheet is used in checking physical conditions. The

second sheet directs the attention of the student to some of the techniques used in the presentation of the lesson. The third sheet requires more skill and analytical judgment than either of the other two. After using it, the student should be able to reproduce the plan used by the supervising teacher. All three sheets are used in both quarters of student teaching, but more emphasis is placed on the third sheet in the second quarter.

Parellel with and following the observations, the students participate in various classroom and teaching activities. Participation Sheet I is used in the first quarter of student teaching. After routine management has been considered, the student lists the activities that she thinks she can perform. Participation Sheet II suggests more difficult activities and is used in the second quarter of student teaching.

Before a student is given full charge of a class, she makes unit plans of the subject matter to be taught. The unit plan is subdivided into daily lessons for which lesson plans are submitted. First quarter students are required to make detailed lesson plans showing what is to be taught and how it is to be presented. Teachers in the field do not have time to make detailed plans, consequently, many do not make plans at all. When a student

teacher develops ability to use a brief plan successfully, she will be more likely to use such plans when she goes out to teach. Near the close of the second quarter of student teaching, the student uses a brief plan. A unit plan, detailed plan, and brief plan are included in the set of supplementary materials. These plans are only

samples and are given to the students as guides in planning other units and lessons.

These supplementary sheets have not been in use long enough to place any value upon them, but they are now being tried out in an effort to improve the teaching methods in the field of home economics.

OBJECTIVES IN THE TEACHING OF LATIN AND ITS RELATION TO OTHER SUBJECTS IN THE CURRICULUM

(Continued from Page 259)

the crop," still our students are making a very creditable showing in general scholarship.

And now just a word about the combination of Latin with other subjects. Mr. Mullins' report for 1931 showed that English, social studies, and home economics were the best combinations with Latin that year for getting positions. Out of nineteen Latin majors all but two were employed (ninety per cent). Last summer English alone stood out in his report as a winning combination with Latin. Of twelve graduates with a Latin-English combination, eight were employed and only four were not. The total number of graduates with Latin as one of the majors was eighteen. Of these eleven were em-

ployed (sixty-one per cent). This per cent compares favorably with that of other departments.

In checking the *Indiana School Directory* for 1932-1933, I found that 814 teachers were teaching Latin in the state; 161 were teaching Latin alone, nearly all in the larger cities; 433 were teaching Latin and one other subject; 197 were teaching Latin and two other subjects; and 23 were teaching Latin and three other subjects. Here, too, Latin with English is the favorite combination, occurring 344 times; Latin with mathematics occurs 149 times; with social studies 138 times; with science 41 times; with commerce 40 times; with music 33 times; and with French 10 times.

The Teaching of French at Indiana State Teachers College and Its Relation to the Curriculum for the Training of Teachers

Harry V. Wann

Head, Department of Romance Languages
Indiana State Teachers College

French is taught in this institution by what is known as the "direct method." The romance language department is interested not only in grammar and pronunciation, but in the world's best thought and in the factors which have made our civilization what it is. It is also interested in training eye-minded students to use their ears, to comprehend quickly and to think straight.

Why do we believe in teaching French?

As this is a teacher training institution, one thinks first of the role it plays in training teachers of French for the schools of the state. A study of the *Indiana School Directory* reveals the following facts:

There are 121 teachers of French in Indiana public schools. Of this number, forty-six teach only French; fifty-two teach French and one other subject. This other subject is English in twenty-one cases; Latin in twelve cases; Spanish in five cases; commerce and history each in three cases; social studies and mathematics each in two cases; and geometry, literary work, journalism, and a deanship in one case each.

Eight teachers are listed simply as modern language teachers.

Thirteen teachers combine French

with two other subjects as follows: Latin and English, three; English and commerce, two; and once each for English and journalism, English and social studies, English and mathematics, mathematics and science, mathematics and agriculture, science and home economics, science and physical education, music and art.

Two persons teach French with three other subjects, English, health, and physical education in one case; social studies, English, and Latin in the other.

Of the total 121 teachers, thirteen are graduates of the Indiana State Teachers College.

From this summary it may be seen that it is not a heavy task to prepare our quota of French teachers for the schools. An equally important function of the romance language department, however, is to assist in providing our graduates with the cultural background which they need as teachers, but which they often sadly lack.

There are many ways in which knowledge of foreign languages is useful. In the first place, as Napoleon said in substance, he who knows two languages has doubled his horizon. A new language opens up a new world of thought that is under-

stood only imperfectly in translation.

Popular arguments for language study, such as ability to understand foreign terms used in literature, facility in travel, and the like may be dismissed as not seriously affecting our students. There are weightier arguments.

It has long been supposed that English was derived in large measure from Latin. The fact is that a very large number of English words come from Latin *through* Old French, and even have today the Old French spelling. In this connection, an article by O. F. Emerson, on the provenience of the English vocabulary, in the publication of the Modern Language Association proceedings for 1923, p. 66f, reveals what a rich cultural background for English the French language is.

The value of language study is threefold. It has its cultural value, giving as it does an insight into the world beyond our shores. A second value is its practical value for the advanced student of science, medicine, law, or comparative literature and the tourist. Its third and most important value is a disciplinary one. To quote Dr. Emile B. de Sauzé, director of modern languages in the Cleveland School of Education:

"The study of modern languages must contribute to the cultural formation of the student and must increase his ability to use facts, to compare them, to discriminate among them, to think quickly, to judge accurately, to go to the bottom of a question and to differentiate rapidly between shadow and substance. Foreign languages, together with mathematics, are the best subjects to give

to the mind capable of culture the gymnastics that will impart the soundest and healthiest habits."

An interesting experiment conducted at the University of Michigan showed that university students' success in university courses was in direct ratio to the amount of language study pursued in high school. Only mathematics approached languages in this disciplinary value.

Reference has here been made to the poor cultural background of the average student, even at the graduate level. This is not to be taken as a criticism of the several departments of the institution. Each has its field and is busy enough. But a man who has only a fair knowledge of English and American literature and history, and to whom the names of Goethe, Voltaire, Socrates, Dante, Cervantes, Montaigne, Petrarch, Homer, Benvenuto Cellini, Vergil, Brunetto Latini, Duns Scot, Erasmus, Victor Hugo, Marguerite of Navarre, Pliny, Euripides, Lope de Vega, and all the rest are meaningless, such a man, though he may know ventilation and lighting, systematic routine and standardized tests, is not a man of culture. Language study is an open door to this treasure house.

And finally, language learning is one arm of national defense. "Know thyself" is a good maxim, but in this complex world it behooves us to know other nations, and to know them thoroughly, in the interest of self-preservation, as well as in the interests of international amity and of commerce. Most progressive nations realize this and capitalize upon it.

The department of romance languages at Indiana State is small.

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Extra-Curriculum Activities in Romance Language Teaching and Recent Cultural Trends

Mildred Louise Woodworth
Assistant Professor of Romance Languages
Indiana State Teachers College

To the mature scholar and the seasoned reader of the classics, the very term "extra-curriculum activities" seems an anathema and an imposition on real erudition and scholarship. Formerly students were content to listen to the instruction offered them in the lecture hall and then leave supposedly to continue on their own initiative with the problem of research suggested by the professor. But in the system of education in which we find ourselves involved today, there is little time left for individual thinking on the part of the student. His time is almost completely monopolized by clubs and organizations of every conceivable description. These may or may not yield him sufficient returns for his time expended. Despite whatever may be said against these innumerable activities, there is much good that may be derived from them by the serious student.

In the realm of romance languages, French clubs have flourished, languished and been revived throughout the history of modern language teaching in the United States. *Le Cercle Français* has become a nation-wide institution, fostered and rejuvenated, when necessary, by its godfather, the *Alliance Française*. The French club was originated and is maintained for the purpose of affording the students

an opportunity to converse in French, to acquire at least a perfunctory knowledge of the social amenities in French, and to discuss interesting current events dealing with Franco-American matters. French plays are presented before the group from time to time and lectures in French accompanied by lantern slides are offered for the instruction and enjoyment of the members. It is hoped that by means of informal meetings of a social character students may feel free to put into practice the idiomatic French they have been taught in the classroom.

Recent cultural trends in romance language teaching would indicate that instructors are beginning to feel more and more the necessity of inculcating within the students a desire to use their leisure time in developing their minds and in establishing a literary reservoir from which they may draw refreshment for a parched and thirsty soul. Would it be too great a departure from practical utilitarianism to suggest that some of the causes of the mental unrest so prevalent at this moment may be due to the inability on the part of great masses of people to fall back on a well-stored mind for solace and pleasure when financial resources and the money to purchase relaxation fail them? That literature is a cul-

tural and moral force of the first magnitude is thoroughly recognized by leaders in education. Reading foreign literature is a peculiarly absorbing task or pleasure, depending upon the reader's point of view or preparation. While engaged in reading a foreign language, he is unconsciously acquiring a foreigner's view point and sympathy as well as the subject matter. Figuratively speaking, he has put on spectacles (and not necessarily rose-colored in tint) and is regarding the issue at hand in another light. Inasmuch as we are forced to do our thinking, not nationally but internationally, it seems that it would be a valuable acquisition if we might form the habit of not merely speaking sympathetically, but thinking sympathetically of those nations that do not speak our language. I am well

aware of the snare that awaits the idealist who foolishly believes that with the elementary study of French comes a visitation of international understanding in the heart of the foreign enthusiast. The process is slow and must be nurtured by sane, practical guidance.

The keen joy of accomplishment plays a major role in the mastery of a foreign tongue; the knowledge that the printed page in a French history or play withholds no secrets from the linguist brings a distinct and warranted pleasure; the delight in following the idiomatic conversation in a novel is a legitimate result of careful preparation and serious study; therefore, teachers of romance languages and foreign literature claim a modest place for their subjects in the college curriculum.

THE TEACHING OF FRENCH AT INDIANA STATE TEACHERS COLLEGE AND ITS RELATION TO THE CURRICULUM FOR THE TRAINING OF TEACHERS

(Continued from Page 266)

Its usefulness should not, however, be judged by the number of French positions available in a given period. The department of physical education, though it trained no teachers in its field, would still justify its existence by the role it plays in keeping our students' bodies healthy and

strong. The romance language department strives to contribute to the development of broad scholarship and the love of learning, by opening up to our students realms which would not be theirs through other channels, and has thus its modest but definite share in their cultural formation.

The Place of the Training School in the Training of a Teacher of French

Mary Olga Peters

Instructor of French Education in Training School
Indiana State Teachers College

A questionnaire was sent to the French department of several leading teachers colleges and universities to secure some data on the academic and professional preparation of teachers of French. The following points to be answered by "yes" or "no" were included in Section I—The Academic Preparation.

Student teachers should:

1. Have a certain degree of fluency in speaking the language.
2. Have a thorough knowledge of the principles of pronunciation, accentuation, and intonation.
3. Be able to pronounce and accentuate when speaking or reading so that they may be easily understood by natives of the country whose language they are teaching.
4. Have an accurate knowledge of grammatical rules and constructions.
5. Have a good speaking vocabulary.
6. Be able to write the language accurately and readily.
7. Have an adequate knowledge of the history, culture, and civilization of the country whose language they are teaching.
8. Have a sympathetic understanding of the ideals and characteristics of the people whose language they are teaching.
9. Become language-minded.

A check mark in the "yes" or "no" column indicated approval or disapproval of that particular point. The final ranking of each point was determined by obtaining the weighted averages. Each of the points mentioned above was admitted important for the future teacher's success. They ranked as follows:

Student teachers should:

1. Have a thorough knowledge of the

principles of pronunciation, accentuation, and intonation.

2. Have an accurate knowledge of grammatical rules and constructions.

3. Have a certain degree of fluency in speaking the language.

4. Be able to pronounce and accentuate when speaking or reading so that they may be easily understood by natives of the country whose language they are teaching.

5. Have a good speaking vocabulary.

6. Have an adequate knowledge of the history, culture, and civilization of the country whose language they are teaching.

7. Be able to write the language accurately and readily.

8. Have a sympathetic understanding of the ideals and characteristics of the people whose language they are teaching.

9. Become language-minded.

Point 10, dealing with the minimum number of hours preparation, varied somewhat. Ohio State University requires sixty semester hours; Michigan University, Fresno State Teachers College, and Ball State Teachers College require forty semester hours; and Western Reserve University requires twenty-two semester hours plus three or four years of a good high school course.

Section II dealt with the professional preparation of teachers of French. The courses ranked in the order named: special methods of teaching the language; student teaching and observation; general psychology; principles of teaching; and psychology of learning.

In Section III—The Personal Qual-

ities of the Prospective Teacher, the traits were ranked as follows: (1) intelligence; (2) a pleasant personality that may give the pupils the inspiration and liking for the language; (3) mental alertness; (4) judgment; (5) enthusiasm; (6) resourcefulness; (7) progressiveness; (8) voice; (9) appearance; (10) cleanliness; (11) grooming; (12) courtesy; (13) tact; (14) adaptability; (15) self control and poise; (16) pleasantness; (17) cheerfulness; and (18) forcefulness.

As soon as the student teacher has completed the academic and professional preparation and has taken his special methods of teaching in French, then he presumably is ready to begin his courses in observation and student teaching. Whether teaching is an art or a science, whether teachers are born or can be made, few will deny that watching experts practice the art or apply the rules of the science and even taking a few faltering steps themselves will

greatly help both born teachers and man-made practitioners; always with the condition, however, that the work observed be that of an experienced teacher and the practice offered be such that good habits and skills will be developed. A good teacher has at least two kinds of equipment; a thorough knowledge of the subject matter to be taught and a technique for imparting this knowledge to others. The teaching of modern foreign languages is a science and an art and, as such, involves certain fundamental laws which can be stated, demonstrated, and proved in the language laboratory much as any scientific law of nature is established, by trial and error, by error, by experimentation, and finally by successful demonstration. These are the laws of language study which many have learned only through years of wasted time and effort, which we can and should pass on to the students we are training.

Some Recent Activities of the Department of Mathematics

Walter O. Shriner

Head, Department of Mathematics
Indiana State Teachers College

SOME GENERAL ACTIVITIES

The department of mathematics at the Indiana State Teachers College is primarily concerned with the training of good teachers of mathematics for the public schools of the state. Constant effort is being made to better perform that function.

1. CURRICULUM CHANGES. The mathematics curriculum has been revised from time to time in an effort to organize and present those mathematics courses which would best train and prepare prospective teachers of public school mathematics for their future work. In a recent report on the Conference of the National Council of Mathematics Teachers held at Minneapolis in February, the special committee of the council outlined a curriculum of courses in mathematics designed to best prepare mathematics teachers and practically duplicated the required courses set up for this institution, which was highly gratifying to staff members of the local department.

2. CRITIC SUPERVISION. In compliance with the wishes of the local administration, the department of mathematics very willingly put into operation the "exchange plan" between the departmental staffs of the training school and college, whereby those members of the college staff engaged in teaching the special methods courses taught a section each in the high school *and* and the regular

critic supervisors in the training school taught a class in college freshman mathematics. Not only was this plan carried throughout the entire year, but also the regular college instructors taking such high school classes were assigned a full share in supervising student teachers. After a full year's experience under this "exchange plan," it is the consensus of opinion of the mathematics department that the plan has considerable merit.

(1) For instructors engaged in teaching the special methods courses there is considerable benefit derived in occasional participation in high school teacher and student-teacher supervision. New theories and methods can be tried and objectively measured and renewed acquaintance with the reactions of adolescents can be made. Perhaps such an exchange for each instructor every two or three years would suffice.

(2) It would seem unnecessary to extend this plan to include those members of the college staff who do not teach educational theory courses. Those who teach high school and college classes concurrently are soon led to realize that the same classroom procedure will not suffice. The greater maturity of college students and the dependence of adolescents (especially high school freshmen and sophomores) on the high school teacher for direct supervision and

guidance reveals the fundamental weakness of the theory that high school methods and teaching technique can be taught through college professionalized subject matter courses.

(3) The exchange plan affords the regular departmental critic supervisors, through the teaching of college freshman courses or the special methods courses, a needed opportunity to become acquainted with the shortcomings of the high school graduate or the embryo teacher.

(4) The needed cooperation between the departmental staffs of the college and training school is naturally improved through the secured knowledge and mutual sympathy in the matter of common problems.

3. GRADUATE STUDENT RESEARCH. Perhaps the greatest opportunity of the department to become connected with research work in the teaching of mathematics comes through the supervision of the theses of graduate students dealing with mathematics teaching. The mere listing of those studies which have been completed or are near completion will give an idea of the importance of this work in fulfilling the primary objectives of the department.

(1) "Analysis of Errors Made by Pupils in Beginning Algebra" by Ira W. Vance.

(2) "Study of the Achievement and Related Factors of Mathematics Majors at Indiana State Teachers College for the Years 1926-1932" by Elizabeth Higgins.

(3) "A Comparative Study of the Usefulness of Different Types of Graphs in Junior High School Mathematics" by Charles M. Hinton.

(4) "Trends in the Teaching of

Mathematics as Revealed by Recent Investigations" by Orvel E. Strong.

(5) "A Course of Study in Seventh and Eighth Grade Mathematics on Three Levels" by Alka Van Ulzen.

(6) "Study of the Applications of Mathematics of Finance in Problems of the Home" by Nanna S. Chestnut.

(7) "Construction of a Prognostic Test in Plane Geometry for Use in Sectioning High School Classes" by Thelma Jobe.

SOME STATISTICAL STUDIES

At the present time, teacher training institutions are very much concerned with both the quantity and the quality of their graduates.

1. THE STATE SUPPLY AND DEMAND. It is interesting to investigate the validity of the claim that too many teachers are being trained in this state. A recent study¹ reveals that for the graduates of all Indiana colleges with licenses to teach for the years 1929, 1930, and 1931, the per cents employed were 82.04, 79.31, and 70.00, respectively. Does this mean that we have been training too many teachers? When one considers that ill health, marriage on the part of women graduates, employment in other occupations, the aim of some to obtain a license merely as a form of insurance against future economic reverses, and the personal disqualifications of still others for teaching, it would seem that reports of oversupply have been exaggerated.

If we are interested in the probable future supply and the probable future demand, we need to consider more than a mere study of past sup-

¹Unpublished study by Robert K. Devricks, "Teacher Supply and Demand in Indiana," 1933.

ply and demand. Probably one of the best measures to be considered would be the proportional per cents of the graduates licensed, graduates employed, and undergraduates enrolled on a teacher training curriculum for each department in all Indiana colleges for 1931.

For art, the three corresponding per cents were 2.31, 4.06, and 3.67. This means that in 1931, 2.31 per cent of all licenses issued were issued in art; 4.06 per cent of all graduates placed were teaching art; and 3.67 per cent of all undergraduates preparing to teach were majoring in art. The figures would indicate that for 1931 the proportionate supply was too small and that the future proportionate supply would remain so in the field of art.

The corresponding proportional per cents for the other departmental subjects are as follows: commerce—5.85, 7.51, and 8.05; English—20.03, 13.54, and 18.37; French—4.00, 1.28, and 4.23; German—.78, .13, and 1.06; home economics—6.31, 7.51, and 6.58; industrial arts—3.70, 6.16, and 1.91; Latin—4.91, 5.48, and 4.35; mathematics—8.70, 9.34, and 8.29; music—6.05, 8.55, and 5.84; physical education for men—3.97, 7.71, and 7.07; physical education for women—2.09, 3.45, and 3.24; science—13.76, 10.96, and 15.75; social studies—16.34, 13.60, and 10.71; Spanish—1.21, .13, and .80.

It will be noted that the proportions of licenses issued in English, French, German, science, Spanish, and social studies were too great. The proportions for all others were too small. Also, there is considerable evidence of a shift taking place in various departments as to the proportional

number of undergraduate majors. A comparison of the last two per cents indicates the tendency to create or continue too large a proportion in commerce, English, French, German, science, and Spanish *unless* there should also develop a corresponding change in the future placement demands.

2. RATING OF MAJORS IN MATHEMATICS. In a recent study⁷ completed under the supervision of the writer, an effort was made to discover the characteristics and ratings of mathematics majors as they progress through their four years of training. Two hundred and twelve mathematics majors graduating from this institution during the five year period, 1926-1932, were involved in the study. Some of the conclusions reached are cited below:

(1) Mathematics majors as a group achieve higher general scholarship indices than they do in mathematics scholarship. The average (mean) general scholarship index was $69.43 \pm .58$ and in mathematics scholarship it was $67.73 \pm .78$.

(2) Mathematics majors as a group rank above the seventieth percentile of college students on the college psychological tests. The average (mean) college intelligence test percentile for the group was 70.94 ± 1.45 .

(3) Mathematics majors, as a group, make lower grades in mathematics as they progress through the four years of college. In freshman courses the average mathematics scholarship index was $71.21 \pm .82$;

⁷Unpublished master's thesis by Elizabeth Higgins—*Contributions of the Graduate School, Indiana State Teachers College*, No. 76.

in sophomore courses, 66.41 ± 1.02 ; and in senior college mathematics courses, $66.28 \pm .94$.

(4) Mathematics majors, as a group, have lower scholarship indices in mathematics than in their other majors. The following figures give the number of cases and the comparative indices for the various other majors.

Cases	Other Major	and Index Mathematics (mean)	Index (mean)
118	Science	74.45	68.09
32	Social Studies	69.87	67.43
28	English	67.92	65.84
19	Latin	73.95	72.49
19	Physical Educ.	71.56	51.88
10	Commerce	73.62	70.45
9	Indus. Arts	78.15	69.07
8	Home Economics	70.38	65.16
6	French	79.17	58.44
3	Music	85.89	81.22

THE COMPOSITION OF MATTER

(Continued from Page 248)

five times as much energy was released as was necessary to project the protons against the lithium atoms. However, the percentage of misses was so great that more energy was used than was released. If the scientific aim improves and the source of inter-atomic energy becomes practical, the possibilities stagger the imagination. Civilization would be affected in ways that even the Technocrats haven't thought of. This work by Cockroft and Walton has been duplicated by Lawrence at the University of California.

The preceding statements are well substantiated by experimental evidence. We wonder what the source of energy is that keeps the stars shining through geologic time. Synthesis and annihilation of atoms are the only processes so far suggested which would supply sufficient heat. Professor Russell, recently elected president of the American Association for the Advancement of Science, has said, "The rate of loss of heat from a star is almost incomprehensively great. We can come nearest to realizing it by remembering that, according to the theory of relativity, heat, like other forms of energy possesses mass. It is as proper to speak of a pound of heat as a pound of ice; but a pound of heat is a very large amount—enough

in fact to melt thirty million tons of rock and turn it into white hot lava. The sun radiates heat away into the depths of space at the rate of 4,200,000 tons per second—and the sun is a smallish star. Upon what vast stores of energy can it draw to keep going?" The explanation lies in the fact that when a proton is built into an element, about 1/130 of its mass disappears and must be represented by heat liberated in the process. The rate of heat production by atomic synthesis increases very rapidly with the temperature. As the internal temperature of stars appears to be of the order of twenty million degrees, it is probable that they are deriving their heat supply from processes of atomic synthesis. The theory is greatly strengthened by the work of Cockroft and Walton that has been described.

An elaborate machine for furthering the work of smashing atoms is being constructed by the Massachusetts Institute of Technology and when we realize how difficult it is to obtain money for research these days, it is very apparent that considerable importance is being attached to this type of investigation. It might be noted in closing that, since the first of the year (1931) Cockroft and Walton have reported the successful breaking down of the boron atom.

Around the Reading Table

High School English, Book Two by Henry Seidel Canby, John Baker Opdycke, and Margaret Gillum. (New York: The Macmillan Company. 1933. Pp. xii, 618.)

Upon the firm foundation laid down in Book One, the authors have erected a commodious pedagogical structure, habitable alike for the teacher and the student. It is a house complete, yet incomplete, for every student will here find generous opportunities for growth in accordance with his own English aptitudes. Here is the office building; let him choose his own floor and fronting. Or here is the palace of art; let him choose his own studio and his own canvas, and shape his masterpieces as he will.

Indeed, the finished structure is carefully fitted to its foundation. Up from the familiar first floor, attractive stairways and elevators lure the student to the unknown, though not undreamt of, upper levels. He may climb without difficulty to some high roof garden, there to enjoy the purer air and fairer view of the cultivated adult life.

Is this estimate too much idealized? Perhaps so. Does any textbook in English really do these things? Probably not. But of all the recent attempts I have seen, this work comes the nearest to the ideal. It is pedagogically the soundest text I know. All the way from the chapters on speech and letter-writing, through those on poetry and précis and library, and on to the grammar review, the main units are integrated carefully with the corresponding parts in Book One. The psychology of the learning devices is sound and alluring.

Of Book Two I may say what I said of Book One (*Teachers College Journal*, July, 1932, p. 323): "The aes-triplex authority of an able literary critic, a careful educationist in the English field, and a widely experienced classroom teacher will commend *High School English* everywhere."

—Leslie H. Meeks

Head, Department of English.

Water Pageants, Games, and Stunts by Olive McCormick. (New York: A. S. Barnes and Company. 1933. Pp. xii, 138.)

This book fascinates from the moment the eye rests on the beautiful and appropriate binding of silver with a suggestive few blue green wavy lines, out of which springs upright, the fantastic trident of Neptune.

Nor has the simple effectiveness of the cover been lost in redundant words inside. The material, culled from the author's many years of varied experiences, has been

condensed to a form which not only convinces the reader that water pageantry has many practical aspects, but also gives definite suggestions with problems anticipated and solutions given.

An idea of the scope of the book may be had from the following brief summary of chapters: 1. "The Production of Water Pageants": choice; organization; adaptation for club, college, school, or camp; rehearsals; and safety measures. 2. "Costuming": sketches and descriptions. 3. "Music": selection and bibliography. 4. "Scenery and Lighting": based on sound engineering and economy of producing desired effects. 5. "How to Write a Water Pageant": step by step procedure with chart of reference material. 6. "Swimming Formations, Stunts, Games, and Canoe Regattas": stick figure diagrams and photographs with complete explanations. 7. "Seven Water Pageants": appropriate music suggested for each and original music scores reprinted for one.

Additional references are given in a four page bibliography of pageants and books on swimming and pageantry.

To anyone who wants the answer to practical problems in water pageantry or merely the inspiration to put on a water pageant, this book is heartily recommended.

—Ruby J. East

Assistant Professor of Physical Education for Women.

Reading the Novel by Elizabeth Christine Cook, assistant professor of English, Teachers College, Columbia University. (Boston: Little, Brown and Company. 1933. Pp. 238.)

Reading the Novel is a most interesting and satisfying presentation of methods in the development of reading habits for the novel as a type of literature. Literally hundreds of novels are used for purposes of analysis and illustration.

Dr. Cook divides the novel into groups on the bases of artistic qualities, purpose, psychological significance, and social values. She then discusses in a series of chapters the development of the reading habits necessary for achieving the objectives of each group—as the technique of skipping, of tasting and skimming, of lingering and reflecting, and of actually studying certain novels which have become classics in world literature.

The book is valuable to the teacher as a text in the development of the novel as a literary type. The brilliant scholarship of the author and the unusually wide range of her reading combined with her charm-

ing, informal style make the reading of this book a rare treat.

—Elizabeth M. Crawford

Association Professor of English.

Dancing in the Elementary Schools by the Committees on Dancing of the American Physical Education Association for the years 1931 and 1932. (New York: A. S. Barnes and Company. 1933. Pp. 134.)

In 1931 the American Physical Education Association appointed a committee to study problems relative to the teaching of dancing in the elementary schools. They raised such questions as: What can actually be accomplished with children at various age levels? What material should be included in our rhythmic program? How should these materials be presented to achieve the best results? A second committee of 1932 further investigated the whole field of rhythmic activities.

This book is a compilation of the reports of those committees, which included such well known names as Dorothy LaSalle, director of health and physical education at East Orange, New Jersey; Margaret H'Doubler, University of Wisconsin; Martha Hill, New York University; and Mary P. O'Donnell, Teachers College, Columbia University.

The teaching of set dances is but one phase of the broad field of rhythmic activities. These reports are an attempt to help realize all the educative possibilities of dancing.

One can readily note the interesting character of this little book by glancing at the table of contents: Objectives for Dancing in Elementary Schools; Methods; Correlation with Other Activities; an Analysis of Accompaniment for the Dance; Dancing for Boys; and Dancing in the Preparation of the Classroom Teacher.

Such a book is a valuable addition to one's library. The topics are offered as opinions and suggestions, not as the final word on the manner in which rhythms should be taught, and act as stimuli for more productive teaching of dancing.

—Miriam DuVall

Graduate Assistant in Physical Education for Women.

"Salaries in City School Systems, 1932-33," *Research Bulletin of the National Education Association*, Vol. XI, No. 2, March, 1933.

This reports the findings of the largest investigation yet completed by the Research Division of the N.E.A. It includes nearly three-fifths of all the cities in the country and practically every one of the larger cities. Almost four hundred thousand school employees are represented. The data are

presented in tabular form with accompanying explanations.

Education and Racial Adjustment, Report of the Second Peabody Conference on Education and Race Relations. Atlanta, Georgia: Commission on Interracial Cooperation. 1932. Pp. 64.

How the subject of race relations is being cared for in a great part of the South is reported in these proceedings of the second conference on Education and Race Relations held at George Peabody College for Teachers last July. The report tells also of interesting experiments in race relations education in Southern public schools. In addition to the reports there are a number of interesting addresses by Dr. Willis A. Sutton, former president of the N.E.A.; Dr. Robert R. Moton, president of Tuskegee Institute; and others.

Educational Leadership, Progress and Possibilities. Eleventh Yearbook of the Department of Superintendence. (Washington, D.C.: National Education Association. 1933. Pp. 517.)

This yearbook answers the questions which occur to the educator often, such as: How can a leader evaluate himself? What are the social agencies for leadership? Who have been some of our great educational leaders? How can leaders in education be chosen and prepared? What philosophy should guide leaders? How can the school superintendent lead?

The book traces the development of educational leadership, summarizes present status, and points a challenge to the future.

Enjoying the Arts, A Group of Essays on Appreciation. (Pittsburgh, Pennsylvania: Scholastic Corporation. 1933. Pp. 30.)

This pamphlet is a collection of essays on the arts which were published in the *Scholastic* under slightly different titles. Some changes have been made in the context and the reading lists have been brought up to date. The contributors are Grant Overton, Percival Hunt, Homer Saint-Gaudens, Harvey Wiley Corbett, Agnes Reppel, Charles Grafly, Witter Bynner, and Walter Prichard Eaton. The introduction was written by Helen Louise Cohen.

The Sword of Sergestus, A Story of "The Grandeur that was Rome," by Paul L. Anderson. (Pittsburgh, Pennsylvania: Scholastic Corporation. 1932. Pp. 32.)

This story first appeared in serial form in the *Scholastic* and is now published in pamphlet form for high school students and teachers.

